

AN ASIAN ELM APHID (HOMOPTERA: APHIDIDAE)
NEW TO NORTH AMERICA

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Abstract.—*Tinocallis saltans*, an Asian elm aphid, is reported for the first time in North America. It was first found in suction trap samples from Idaho, and subsequently in samples from Washington, Utah and Texas. It has also been collected from *Ulmus pumilla* in Idaho. Based on the sequence of dates of first collection at our various trapping locations, we think the aphid has been recently introduced.

Key Words: Aphididae, *Tinocallis saltans*, first report

A single specimen of a species of *Tinocallis* was found in a suction trap (Allison and Pike, 1988) sample at Parma, Canyon County, Idaho, in September, 1986. By using Remaudiere, Quednau and Heie (1988) and Zhang and Zhong (1983), we determined the aphid to be an Asian species, *Tinocallis saltans* (Nevsky) (Fig. 1). Our determination was confirmed by G. Remaudiere, and specimens matched those in the first author's possession from China determined by Zhang. Other species of *Tinocallis* reported in North America include *Tinocallis platani* (Kaltenbach), *T. ulmifolii* (Monell) and *T. nirecola* (Shinji) (Smith and Parron 1978, Kono 1983). Of these, the species found here most closely resembles *T. nirecola* but has much longer dorsal abdominal tubercles and oval (as opposed to linear) rhinaria on the third antennal segment.

In October, 1987, another ten specimens were collected in traps in Parma and Caldwell, both in Canyon County in southwestern Idaho. By 1988 the species was found consistently in trap samples in the warmer

parts of the state, and it was collected for the first time in traps at cooler, higher elevations in southeastern Idaho. The first collection in northern Idaho (Lewiston) occurred in August, 1989. During May and June, 1989, it was the most abundant species in 4 out of 9 samples taken in Parma, indicating it has become well established in the warmest part of the state.

Tinocallis saltans has now been found in suction trap samples from the following locations (dates indicate year of first collection): Idaho—Aberdeen (1988), American Falls (1989), Caldwell (1987), Kimberly (1988), Lewiston (1989), Moscow (1989), Mountain Home (1988), Parma (1986), Preston (1989), Ririe (1988), Rockland (1989) and Soda Springs (1988); Oregon—Hermiston (1989); Texas—Amarillo (1989) and Lubbock (1989); Utah—Logan (1988), Salt Lake City (1988) and Vernal (1988); Washington—Connell (1989), Ephrata (1989), Paterson (1989), Prescott (1989), Prosser (1989) and Quincy (1989). No *T. saltans* specimens have been found in trap samples from the six trapping locations in



Fig. 1. *Tinocallis saltans* (Nevsky), collected from *Ulmus pumila*, Parma, ID, 27 September 1989.

Montana (Bozeman, Conrad, Huntley, Moccasin, St. Xavier and Sidney). Traps have been in place in Washington since 1984, in Idaho since 1985, in Montana and Utah since 1987, and in Texas only since 1989.

The collection sequence in Idaho appears to be typical for recently introduced aphid species. Examples include *Hyadaphis tataricae* (Aizenberg) and *Diuraphis noxia* (Mordvilko) (Voegtlin 1981, Stoetzel 1987, Halbert et al. 1986–1989). These species were also collected first in southwest Idaho, the warmest part of the state, and later at cooler locations. We think this pattern occurs because the longer, warmer season in southwest Idaho allows populations in this area to reach detectable levels first. Dates of first collection at new locations within a season reflect phenology rather than migration. Collections at new locations in subsequent years reflect range extension. Thus,

based on the sequence of dates of first collection at each location, it is probable that *T. saltans* has also been recently introduced into North America. Because Idaho is an inland state without commerce involving importation of elm trees, it is unlikely the introduction occurred here.

Tinocallis saltans has been found on *Ulmus pumila* in Caldwell, Parma and Mountain Home, Idaho. *Ulmus americana* and *Ulmus parvifolia* were examined in Parma, but no *T. saltans* were found. In life, *T. saltans* has a bright, lemon yellow abdomen with dark markings. The thorax is dark brown. As the name suggests, the aphids jump readily.

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